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Claims

1. A semiconductor wafer having at least one region carrying information for identification,

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characterized in that

the information for identification is provided by magnetic means.

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2. The semiconductor wafer according to claim 1, wherein the magnetic means comprise magnetic ions that are implanted into the semiconductor wafer.

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3. The semiconductor wafer according to claim 1, wherein the magnetic means comprise at least one magnetic film that is placed on at least one surface of the semiconductor wafer.

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4. The semiconductor wafer according to claim 1, wherein the magnetic means comprise a series of magnetic regions and nonmagnetic regions, thereby providing a code pattern.

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5. The semiconductor wafer according to claim 1, wherein the magnetic means comprise magnetic regions having different magnetizations.

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6. The semiconductor wafer according to claim 1, wherein the magnetic means are covered with at least one film layer.

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7. The semiconductor wafer according to claim 1, wherein the magnetic means are placed near a semiconductor wafer edge.

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8. The semiconductor wafer according to claim 1, wherein the magnetic means are placed at an inner region of a semiconductor wafer surface, where a vacuum chuck having magnetic reading capabilities may engage the

10 semiconductor wafer.

9. A method of providing on a semiconductor wafer at least one region carrying information for identification,

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characterized by the steps of

20 - providing a semiconductor wafer and  
- providing the at least one region with magnetic means.

25 10. The method according to claim 9, wherein the magnetic means are provided by ion implantation of magnetic ions.

11. The method according to claim 9, wherein the magnetic means are provided by sputtering of magnetic ions.

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12. The method according to claim 9, wherein providing the at least one region with magnetic means comprises depositing a magnetic film on at least one surface of the semiconductor wafer.

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13. The method according to claim 9, wherein the magnetic means are provided in a series of magnetic regions by direct writing techniques.

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14. The method according to claim 9, wherein the magnetic means are provided in a series of magnetic regions by masking of the semiconductor wafer.

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15. The method according to claim 9, further comprising the step of covering the magnetic means with at least one film layer.

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16. A system for identifying a semiconductor wafer comprising

- a semiconductor wafer having at least one region carrying information for identification, and

- reading means for reading the information for identification,

25 characterized in that

- the information for identification is provided by magnetic means and

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- the reading means comprises a magnetic sensor placed adjacent to a surface of the semiconductor wafer.

5 17. The system according to claim 16, wherein

- the magnetic means are placed near a semiconductor wafer edge,
- the magnetic sensor is placed above the semiconductor wafer, and
- the semiconductor wafer is rotatable so that the magnetic means pass the magnetic sensor.

10 15 18. The system according to claim 16, wherein the magnetic sensor is movable so that the magnetic sensor passes the magnetic means.

20 19. The system according to claim 16, wherein

- the magnetic means are placed at an inner region of a semiconductor wafer surface, and
- the magnetic sensor is provided in combination with a vacuum chuck that may engage the semiconductor wafer surface at an inner region.

25 30 20. The system according to claim 16, wherein the magnetic means comprise magnetic ions that are implanted into the semiconductor wafer.

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21. The system according to claim 16, wherein the magnetic means comprise at least one magnetic film that is placed on at least one surface of the semiconductor wafer.

22. The system according to claim 16, wherein the magnetic means comprise a series of magnetic regions and nonmagnetic regions, thereby providing a code pattern.

10 23. The system according to claim 16, wherein the magnetic means comprise magnetic regions having different magnetizations.

15 24. The system according to claim 16, wherein the magnetic means are covered with at least one film layer.

20 25. A method for identifying a semiconductor wafer having at least one region carrying information for identification, using reading means for reading the information for identification,

characterized by the steps of

25 - providing the information for identification by magnetic means, and

- reading the information for identification by a magnetic sensor placed adjacent to a surface of  
30 the semiconductor wafer.

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26. The method according to claim 25, further comprising the step of providing a series of magnetic regions and nonmagnetic regions, thereby providing a code pattern.

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27. The method according to claim 25, further comprising the step of providing magnetic regions having different magnetizations.

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28. The method according to claim 25, further comprising the steps of

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- placing the magnetic means at a semiconductor wafer edge,
- placing the magnetic sensor above the semiconductor wafer edge, and
- rotating the semiconductor wafer so that the magnetic means pass the magnetic sensor.

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29. The method according to claim 25, further comprising the step of moving the magnetic sensor so that the magnetic sensor passes the magnetic means.

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30. The method according to claim 25, further comprising the steps of

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- placing the magnetic means at an inner region of a semiconductor wafer surface,

- engaging the semiconductor wafer surface at an inner region by a vacuum chuck having magnetic reading capabilities, and
- reading the information for identification by using the reading capabilities of the vacuum chuck.

George Washington